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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,315	10/15/2003	Phillip L. Jordan	MI2.014	7248
23893	7590	04/01/2005	EXAMINER	
TIMOTHY E SIEGEL 1868 KNAPPS ALLEY SUITE 206 WEST LINN, OR 97068			SARKAR, ASOK K	
			ART UNIT	PAPER NUMBER
			2891	

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,315

Applicant(s)

JORDAN ET AL.

Examiner

Asok K. Sarkar

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 15 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 3-12 is/are allowed.
- 6) ☒ Claim(s) 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/04 and 3/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I claims, 1 – 14 in the reply filed on February 4, 2005 is acknowledged.
2. Claim 15 was withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II claim, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 4, 2005.

Claim Objections

3. Claim 2 is objected to because of the following informalities: In line 24, the phrase " thereby together with step (g)" should be deleted since the phrase makes the claim language unclear. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin, US 6,406,939.

Regarding claim 13, Lin teaches in an electrical device work piece having a major horizontal top surface, a method for creating a vertical planar conductive feature, said method comprising:

- (a) machining through said major horizontal top surface, to create a trench 306 (see Fig. 3B) in column 4, lines 55 – 58 and in column 6, lines 1 – 3 ;
- (b) plating at least a portion of one side of said trench 306 with conductive material 307, thereby creating a vertical planar conductive feature (see Fig. 3B) in column 6, lines 4 – 7.

Regarding claim 14, Lin teaches the step of sputtering for forming the conductive material onto at least one side of the trench in column 6, line 6, and the sputtering by partially non-directional manner is inherent in the process for the deposition on the side wall of the trench by the sputtering process.

Allowable Subject Matter

- 6. Claims 1 and 3 – 12 are allowed.
- 7. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
- 8. The following is an examiner's statement of reasons for allowance:

Claims 1 – 12 recite, inter alia, a method of forming a multilevel electronic device by machining into a substrate a set of first indentations, at a first level, depositing conductive material into the first indentations to create a set of first conductive features, filling the first indentations with dielectric material, machining again into said substrate a set of second indentations, at a second level and depositing conductive material into said second indentations to create a set of second conductive features. The art of record does not disclose or anticipate the above limitation in combination with other

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claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

Conclusion

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

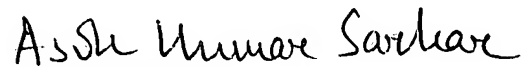
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asok K. Sarkar whose telephone number is 571 272 1970. The examiner can normally be reached on Monday - Friday (8 AM- 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William B. Baumeister can be reached on 571 272 1722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Asok K. Sarkar".

Asok K. Sarkar
March 28, 2005

Primary Examiner